

## Texas Brine Company, LLC 1301 Highway 70

Belle Rose, LA 70341

Phone: 985-369-6657 Fax: 985-369-7873



November 27, 2013

Commissioner James H. Welsh P.O. Box 94275 Baton Rouge, LA 70804

# **RE:** In response to State of Louisiana Department of Natural Resources Office of Conservation's Second Amendment to Declaration of Emergency and Directive

Commissioner Welsh,

In response to the Second Amendment and Declaration of Emergency and Directive order issued by the Louisiana Department of Natural Resources (LDNR), Office of Conservation on September 25, 2012, Texas Brine Company, LLC (TPC) understands the seven items listed in the document.

In the above mentioned, TBC was specifically directed and ordered to perform certain tasks outlined in the above mentioned document. Below are the required responses, as directed.

- 1. TBC's counsel provided LDNR legal counsel with a response to Directives 1-3 on September 28, 2012.
- 2. TBC understands Directive 4, which is to provide all daily logs and field notes from all contractors conducting investigation into subsidence and natural gas bubbling. The Daily Action Summary and results for current information can be found in the Attachment section of this report.
- 3. TBC understands Directive 5, which directs TBC to immediately allow for split or share any sample taken on site related to Well 3A (Serial Number 974265), the cavern, other wells facilities or other site locations. The Daily Action Summary of today's collection can be found in Attachment section of this report.
- 4. TBC understands Directive 6, which directs TBC to immediately report the results (final and preliminary) of any tests, logs samples or data collection performed on Well 3A, the cavern, other wells, facilities or site locations that indicate a change in any previously known conditions related to the investigation of the subsidence or natural gas bubbling

- events, and continue to report any such results. The Daily Action Summary and the Results related to this Directive can be found in Attachment section of this report.
- 5. TBC understands the Directive 7, which states that TBC will provide a daily summary of all tests, or logs performed or samples taken from Well 3A and the cavern as well as any results of those tests or logs, including preliminary as of September 25, 2012 and going forward. The Daily Summary and Results related to this Directive can be found in Attachment section of this report.

Please note that the drilling rig used for the Observation Well 3A has been removed and the site is being rigged down and returned to pre-drilling condition. As such, daily drilling reports for this well have ceased. Plans are being made for longer term potential gas venting/flaring requirements and possible hydrocarbon material recover from Well 3A.

In addition, previous daily summary reports issued to LDNR have included significant duplicate information as there is a fair amount of overlap in the information requested in each of the Directives included in the September 25, 2012 order. All requested information associated with the Directives issued in the September 25, 2012 order are included in the Attachment section of this report.

TBC believes that the submittal of this report satisfies the requirements of the Declaration of Emergency and Directive issued on September 25, 2012. As directed this report is submitted by email to <a href="mailto:conservationorder@la.gov">conservationorder@la.gov</a>, ref. "Emergency Declaration-Texas Brine Company LLC-9/25/2012.

Bruce E. Martin

Vice President, Operations

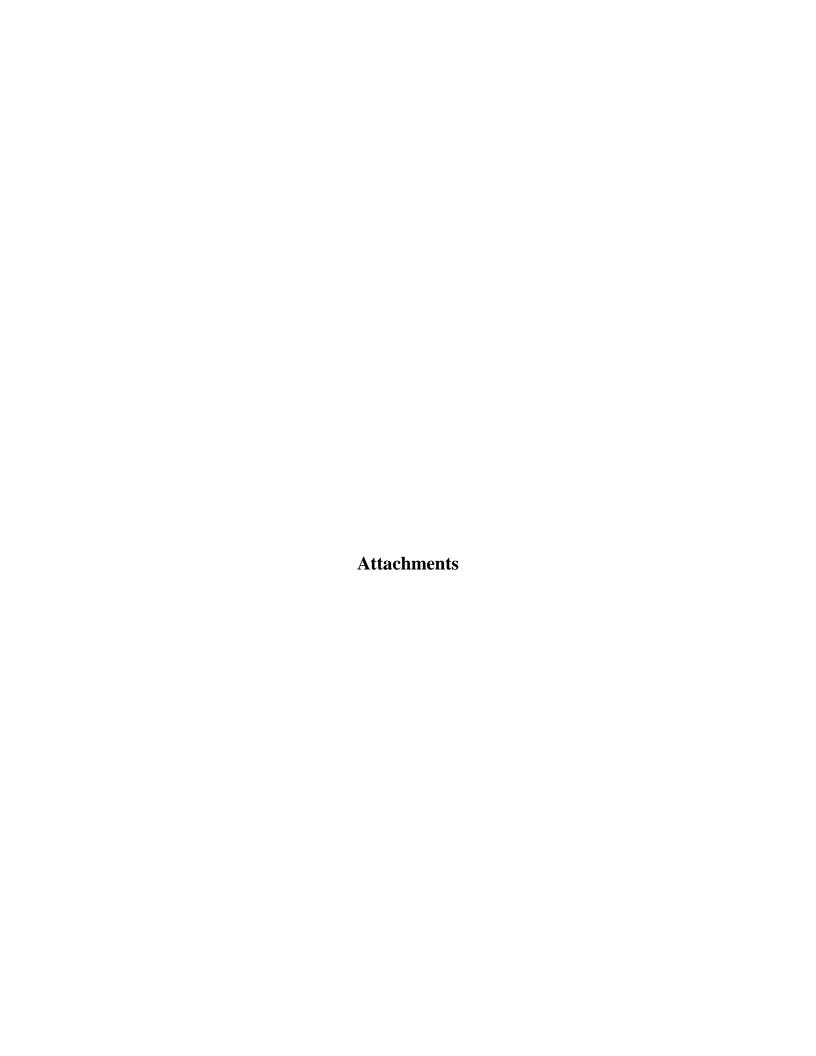
Bana EMart

Texas Brine Company, LLC



			TBC Oxy Gran	d Bayou Data Manage	ment-Enviro	nmental					
Contractor	Responsibilities	Coll	lected By	Date Collect	ed	Delivered to Lab	Results from Lab	Laboratory	Method	Date to Ag	gencies
Sage	Stationary Air Monitoring	Deshotel (Code Roxana Dubose 18:00; Britt Barne	Eric Rucinski - 07:55 - 15:45, Chad Deshotel (Code Red) - 00:00 - 06:00; Roxana Dubose (Code Red) - 06:00 - 18:00; Britt Barnett (Code Red) - 18:00 - 24:00		3	NA	NA	NA	NA	11/27/2	2013
	Residential Air Monitoring	bimonthly resident Therefore, Sage	equested to suspend ential air monitoring. will discontinue these tivities.	NA		NA	NA	NA	NA	NA	
	Gas Seep Sampling	No wor	k performed	11/26/201	3	NA	NA NA		NA	NA	
	Well Gas Sampling	GP-22-1 at	haughnessy 09:15 and 09:20 10:59 and 11:01	11/26/201	3	Yes (via SPL)	No	Schlumberg er Isotech	IFT Isotopic	upon rece results fro	
_	Under Slab Gas Sampling	No work performed 11/26/2013 NA NA NA							NA	NA	
	Indoor Air Monitoring	_	k performed	11/26/201		NA	NA.	NA NA	NA NA	NA NA	
Respec	Inclinometers/Tilt Meters/Transducers	11/26/2013	No work Conducted	NA	NA	NA	NA		NA NA	NA	NA
	InSAR Reflector Installations	11/26/2013	No work Conducted	NA	NA	NA	NA		NA	NA	NA
	Subsidence Survey-Fenstermaker	11/26/2013	No work Conducted	NA	NA	NA	NA		NA	NA	NA
	Shallow Geophone Installation	11/26/2013	No work Conducted	NA	NA	NA	NA		NA	NA	NA
	Deep Geophone Installation	11/26/2013	No work Conducted	NA	NA	NA	NA		NA	NA	NA
	Amendment #3, Directive #2	11/26/2013	No work Conducted	NA	NA	NA	NA		NA	NA	NA
	Expansion of geoprobe gas sampling locations	11/26/2013	No work Conducted	NA	NA	NA	NA		NA	NA	NA
	DPVE	11/26/2013	No work Conducted	NA	NA	NA	NA		NA	NA	NA
	Abandon Casing Survey	11/26/2013	No work Conducted	NA	NA	NA	NA		NA	NA	NA
	MIHPT	11/26/2013	No work Conducted	NA	NA	NA	NA		NA	NA	NA
Miller	Weekly Stability Survey	No wor	k performed	November 26,	2013	NA	NA	NA	NA	NA	
	Misc. Survey Work	N	Л. Fore	November 26,	2013	NA	NA	NA	NA	NA	
	Sinkhole Hydro/Perimeter Survey	No wor	k performed	November 26,	2013	NA	NA	NA	NA	NA	
Pisani	Surface Water		NA	November 26,	2013	NA	NA	NA	NA	NA	
	Sinkhole		NA	November 26,		NA	NA	NA	NA	NA	
_	Industrial Well Water		NA	November 26,	2013	NA	NA	NA	NA	NA	
	MRAA Well Water		NA	November 26,		NA	NA	NA	NA	NA	
	GP/ORW Water		NA	November 26,		NA	NA	NA	NA NA	NA	
	Cavern Water		NA	November 26,		NA	NA	NA	NA NA	NA	
_	Discharge/Outfall Water	1	NA	November 26,		NA	NA	NA	NA NA	NA	
	Geoprobe Wells		NA	November 26,	2013	NA	NA	NA	NA	NA	
				Grand Bayou Well	3A						
	Daily Operations at 3A						Today's events				
						Ox	y 3A				

		Grand Bayou Well 3A	<del>-</del>
Daily Operations at 3A			Summary of Today's events
			Oxy 3A
11/27/2013	7am		
	852.19	11/27/2013	
			Relief Well #1
11/27/2013			See ORW-01 Flare Spreadsheet



#### **Daily Action Summary**

#### November 26, 2013

#### Sinkhole Perimeter Air Monitoring and Neighborhood ORWs Air Monitoring

- Eric Rucinski onsite from 07:55 15:45. Changed out the monitors between 08:13 and 14:20. Collected data from the monitoring database and forwarded to Steven Shaughnessy in the Baton Rouge office for processing.
- Code Red (monitor sub-contractor) onsite for continuous 24/7 monitoring:
  - o Chad Deshotel onsite from 0:00 to 06:00
  - o Roxana Dubose onsite from 06:00 to 18:00
  - o Britt Barnett onsite from 18:00 to 24:00

Technicians also assisted in battery change outs and maintenance of the monitoring equipment as necessary.

<u>NOTE</u>: ORW-9 and TR-1 were relocated to ORW-9a and TR-1a respectively. The monitoring locations were relocated in support of new monitoring equipment installed on November 26, 2013. The new monitoring location coordinates are listed below. A revised sinkhole monitor location map is additionally attached.

ORW-9a: N30°00'44.52"; W91°08'50.56"
 TR-1a: N30°00'40.13"; W91°08'23.83"

#### **Residential Air Monitoring**

• Sage has been requested to suspend bimonthly residential air monitoring. Therefore, Sage will discontinue these activities. The last event was conducted on March 26, 2013.

#### **Gas Seep Sampling**

• Not Scheduled

#### **Well Gas Sampling**

- As part of the Comprehensive MRAA Sampling Program, samples were collected from the following wells by Steve Shaughnessy:
  - o GP-22-1 at 09:15 and 09:20
  - o GP-22-3 at 10:59 and 11:01

Samples were delivered to the Accutest service center where the samples were transported to the SPL Louisiana laboratory. Samples collected for isotopic analysis will

be shipped to Isotech Laboratories in Illinois. Samples collected for interfacial tension analysis will be shipped to the Schlumberger Reservoir Laboratory in Texas.

#### **Under Slab Gas Sampling**

• Not Scheduled

#### **Air Indoor Monitoring**

• Not Scheduled

#### Texas Brine - Belle Rose, Louisiana Hourly Air Monitoring Data Neighborhood Monitoring

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

	Observation 1	Relief Well -49 at th	ne Well Head	Observation F	Relief Well - 50 at the	he Well Head
		ORW-49-WH			ORW-50-WH	
Date-Time *	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)
11/26/2013 01:00:00 AM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 02:00:00 AM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 03:00:00 AM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 04:00:00 AM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 05:00:00 AM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 06:00:00 AM	0.0	0.0	20.9	<1.0	0.0	20.9
11/26/2013 07:00:00 AM	0.0	0.0	20.9	<1.0	0.0	20.9
11/26/2013 08:00:00 AM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 09:00:00 AM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 10:00:00 AM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 11:00:00 AM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 12:00:00 PM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 01:00:00 PM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 02:00:00 PM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 03:00:00 PM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 04:00:00 PM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 05:00:00 PM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 06:00:00 PM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 07:00:00 PM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 08:00:00 PM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 09:00:00 PM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 10:00:00 PM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 11:00:00 PM	0.0	0.0	21.0	<1.0	0.0	21.0
11/27/2013 12:00:00 AM	0.0	0.0	21.0	<1.0	0.0	21.0

Notes:

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

	Observation Relief Well -5 Observation Relief Well -9 OPW 9								Observa	ntion Relief	Well - 9			Observ	ation Relief	Vell -11			South	of OG3A-1				(	Onsite Traile	ers			On	site Trailers				
			ORW-5					ORW-9					ORW-9a					ORW-11a				F	Pad #9					TR-1					TR-1a	
		Non-					Non-					Non-					Non-					Non-					Non-					Non-		
		Methane					Methane					Methane					Methane					Methane					Methane					Methane		
Date-Time *	CO (ppm)	VOC (ppm) H	I2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	SO2 (ppm) V	VOC (ppm) H2	2S (ppm)	LEL (%)	O2 (%)	CO (ppm)	VOC (ppm)	H2S (ppm)	) LEL (%)	O2 (%)	CO (ppm) V	OC (ppm) H	2S (ppm)	LEL (%) O2 (%)
11/26/2013 01:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9						<1.0	0.0	VI.0	0.0	20.5	0.0	0.0	0.0	0.0	20.5	0.0	0.0	0.0	0.0	20.9	1			
11/26/2013 02:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9						<1.0	0.0		0.0		0.0	0.0	0.0	0.0	20.5	0.0	0.0	0.0	010	20.9				
11/26/2013 03:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9						<1.0	0.0		0.0	20.5	0.0	0.0	0.0	0.0	20.5	0.0	0.0	0.0	0.0	20.9	1			
11/26/2013 04:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9						<1.0	0.0	<1.0	0.0	20.5	0.0	0.0	0.0	0.0	20.5	0.0	0.0	0.0	0.0	20.9	1			
11/26/2013 05:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	Data collect	on at OPW	la bagan at	11:43 AM on	11/26/2013	<1.0	0.0		0.0		0.0	0.0	0.0	0.0	20.5	0.0	0.0	0.0	0.0	20.9				
11/26/2013 06:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.0	Data concer	on at OK W-	a ocgan at	11.45 AM OII	11/20/2015.	<1.0	0.0		0.0	21.0	0.0	0.0	0.0	0.0	20.5	0.0	0.0	0.0	0.0	20.9	Data collecti	on at TR-1a b	egan at 12:1	1 PM on 11/26/2013.
11/26/2013 07:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.0						<1.0	0.0		0.0	21.0	0.0	0.0	0.0	0.0	20.5	0.0	0.0	0.0	0.0	20.9	1			
11/26/2013 08:00:00 AM	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	21.0						<1.0	0.0	<1.0	0.0	21.0	0.0	0.0	0.0	0.0	20.5	0.0	0.0	0.0	0.0	20.9	1			
11/26/2013 09:00:00 AM	<1.0	0.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0	21.0						<1.0	<1.0	<1.0	0.0		<1.0	0.0	<1.0	0.0	20.8	<1.0	0.0	0.0	0.0	20.9				
11/26/2013 10:00:00 AM	<1.0	0.0	0.0	0.0	21.0	0.0	0.0	0.0	0.0	20.9						0.0	<1.0	0.0	0.0	21.0	<1.0	0.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.7	1			
11/26/2013 11:00:00 AM	<1.0	<1.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0		20.9	0.0	<1.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.5				
11/26/2013 12:00:00 PM		0.0	0.0	0.0	20.9	1					0.0	0.0	0.0		20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0	<1.0	0.0	20.9	<1.0	0.0	0.0	0.0	20.5	<1.0	0.0	0.0	0.0 20.4
11/26/2013 01:00:00 PM	0.0	0.0	0.0	0.0	20.9	<u>J</u>					0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9						<1.0	<1.0	0.0	0.0 20.9
11/26/2013 02:00:00 PM	0.0	0.0	0.0	0.0	20.9						0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9						<1.0	<1.0	0.0	0.0 20.9
11/26/2013 03:00:00 PM	0.0	0.0	0.0	0.0	20.9						0.0	0.0	0.0		20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9						0.0	0.0	0.0	0.0 20.9
11/26/2013 04:00:00 PM		0.0	0.0	0.0	20.9	<u>J</u>					0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9						0.0	0.0	0.0	0.0 20.9
11/26/2013 05:00:00 PM		0.0	0.0	0.0	20.9	OPWO	relocated to OF	W Qa Data	collection at (	DW 0	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9						0.0	0.0	0.0	0.0 20.9
11/26/2013 06:00:00 PM	0.0	0.0	0.0	0.0	20.9	OKW-9	stopped at 11			JIC W-)	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	TR-1 reloca	ated to TR-1:	<ul> <li>a. Data colle</li> </ul>	lection at TR-1	stopped at	0.0	0.0	0.0	0.0 20.9
11/26/2013 07:00:00 PM	0.0	0.0	0.0	0.0	20.9		stopped at 11	.42 AWI OII 11.	20/2015.	Ī	<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9		12:10	PM on 11/20	6/2013.		<1.0	0.0	0.0	0.0 20.9
11/26/2013 08:00:00 PM		0.0	0.0	0.0	20.9	]					0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9						<1.0	0.0	0.0	0.0 20.9
11/26/2013 09:00:00 PM	<1.0	0.0	0.0	0.0	20.9						0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	ĺ					0.0	0.0	0.0	0.0 20.9
11/26/2013 10:00:00 PM	<1.0	0.0	0.0	0.0	20.9	1				Ī	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	l					0.0	0.0	0.0	0.0 20.9
11/26/2013 11:00:00 PM	0.0	0.0	0.0	0.0	20.9						<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	ĺ					<1.0	0.0	0.0	0.0 20.9
11/27/2013 12:00:00 AM	<1.0	0.0	0.0	0.0	20.9						<1.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	0.0	20.9	ĺ					0.0	0.0	0.0	0.0 20.9

Notes:

Analysis Requested



#### Send Data and Invoice to

Name: Karl Duckworth

Company: Sage Environmental Consulting

Address: 8440 Jefferson Hwy, Suite 400

Baton Rouge, LA 70809

Phone: 225-927-2258

Fax: 225-927-2256

Email: Karl Duckworth@sageenvironmental.com

Project: Texa	is Brine	
Purchase Order		
Location: Boyc	V Come, B.	the Read LA
Sampled By:	S. Shaugh	ne.55 ()
Circle one:	Standard	
	Priority	
	Puch	

### **Sample Description**

Container Number	Sample Identification	Date Sampled	Time		Comments
	GP-22-1-1	11/20/13	09 15		C=112
	GP-22-3-1	11/26/13	10:59		Cal. 5
					•

### **Chain-of-Custody Record**

Signature	Company	Date	Time
Relinquished by Ath Ahashan	Sage	11/26/13	
Received by E May + n	Acoutest	11/22/13	1364
Relinquished by			
Received by			
Relinquished by			
Received by			



Weatherford

#### Schlumberger Reservoir Laboratories: Houston

6350 W Sam Houston Pkwy N Suite 200

Houston, TX 77041

Phone (713) 482-0700 Fax (713) 482-0777

## **Chain of Custody**

Schlumberger

Client Information	Sampler. S. Shaughnessy			Lab PM: Leslie Zhang									Carrier Tracking No(s):							T				
Client Contact:	Phone:			E-	Mail:					_			┪							Pag				
Karl Duckworth Company:	225-927-2258			₫	zhang	g9@	slb.c	om			_	_		_		_				Pa Job	ge 1 of 1			
Sage Environmental Consulting LP											Analy	ysis	Regu	este	d					500	μ.			
Address:	Due Date Requested: ASAP				100		П				П	П		Т		T		152	8	2.6	servation Codes		.,	
8440 Jefferson Hwy Suite 400 City:	TAT Requested (days	d:	_		- 9									- 1				50		700	Zinc Acetate HCI			
Baton Rouge		1			- 3									- [			ш			(BS)	Nitric Acid			
State, Zip:	1				2											1		變	差	-	EDTA			
LA 70809 Phone:	PO #:				- 8	50										1		1		(57)	EDA Glutaraldehyde			
225-927-2258					till til	7.						- 1		4		1			Y	350	NaOH			
Em <b>a</b> il:	WO #:				Ē	0.7	1-											333		800	ce			
karl.duckworth@saqeenvironmental.com Project Name:	Project#:				r No(N))	N.	H-					- 1	-1			1				275	None Other (specify belo			
Texas Brine	roject ir.				ŝ	J	Ļ					- 1	- 1			1		(mr)			H <sub>2</sub> SO <sub>4</sub>	<i>m</i> )		
Site:					- 8	1	4-	7-				- 1	- 1							S - Oth	ar:			
Bayou Come			r - r		- James	2	A4: 50										<u> </u>							
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water S=solid, O=oil)		Meire	Gas	3 S S S S S S S S S S S S S S S S S S S										E POE	Special	nstructions	s/Note:			
Charles and the second of the		$\sim$		tion Code:	X	湯	48												g Calendaria		25 A VI	的特色		
GP=22-1-2	11/26/13	09 20			X	X	X							T				Ĭ	4	C	1.5			
GP-22-3-2	11/26/13	11:01		C, 14.5		X	X	X				П				Т	Т	Т	ACO.		Ca.	1.5		
					$\top$	H		7	T	7	7	T	1	_	+	+	t	+	3	6			-	-
					+	H	$\dashv$	-	-	-	+	+	+	+	+	+	+	╆	- 2	2				
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					+	Н	$\rightarrow$	$\dashv$	$\dashv$	$\dashv$	+	$\dashv$	+	+		+	+	+	J. 6	94 50				
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					T	Н	$\neg$	$\dashv$	$\dashv$	7		+	┪	+	+	+	+	+	9	3				==
Possible Hazard Identification						Sar	nole	Disn	neal	(A)	stora	no f	aa wi	II he	2550	5500	l for s	amo	los :	after	1 month)			$\dashv$
Non-Hazard Flammable Skin Irritant H <sub>2</sub> S	Unknown	Radiol	ogical			Ü	Gample Disposal ( A storage fee will be assessed for Return To Client Lab Disposal								,,,,,	200				nths		I		
Deliverable Requested: I, II, III, IV, Other (specify)	Фринфии	7 (4010)	- Groun		_	Spe	Special Instructions/QC Requirements								70307			0101	670			iiii3		$\dashv$
Sample Kit Relinquished by:		Data											_		-16-3				_					
	Date/Time:	Date:	Tr.	Company	1'"	me:	Receiv	uad h	v	_					eu 10d		pment		uc	_		Company		
Relinquished, by:	11/26/13	3		Schlumberg	ar- 50	CHE			7	MC	LA	D	J			Da	ite/Tim	124	113	3	13:04	Company	utes	st
Refinquished by: U	Date/Time:			Company		Received by:				Date/Time:							Company							
elinquished by:	Date/Time:		C	Company			Receiv	ved by	y:							Da	te/Tim	9:		_		Company		$\neg$
					Cooler Receipt Temperature(s) *C and Other Remarks;									g or gray										





Sinkhole Monitor Locations November 26, 2013

#### Texas Brine - Belle Rose, Louisiana Hourly Air Monitoring Data Neighborhood Monitoring

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

	Observation 1	Relief Well -49 at t	he Well Head	Observation l	Relief Well - 50 at t	he Well Head
		ORW-49-WH			ORW-50-WH	T
Date-Time *	H2S (ppm)	LEL (%)	O2 (%)	H2S (ppm)	LEL (%)	O2 (%)
11/26/2013 05:00:00 AM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 06:00:00 AM	0.0	0.0	20.9	<1.0	0.0	20.9
11/26/2013 07:00:00 AM	0.0	0.0	20.9	<1.0	0.0	20.9
11/26/2013 08:00:00 AM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 09:00:00 AM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 10:00:00 AM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 11:00:00 AM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 12:00:00 PM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 01:00:00 PM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 02:00:00 PM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 03:00:00 PM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 04:00:00 PM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 05:00:00 PM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 06:00:00 PM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 07:00:00 PM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 08:00:00 PM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 09:00:00 PM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 10:00:00 PM	0.0	0.0	21.0	<1.0	0.0	21.0
11/26/2013 11:00:00 PM	0.0	0.0	21.0	<1.0	0.0	21.0
11/27/2013 12:00:00 AM	0.0	0.0	21.0	<1.0	0.0	21.0
11/27/2013 01:00:00 AM	0.0	0.0	21.0	<1.0	0.0	21.0
11/27/2013 02:00:00 AM	0.0	0.0	21.0	<1.0	0.0	21.0
11/27/2013 03:00:00 AM	0.0	0.0	21.0	<1.0	0.0	21.0
11/27/2013 04:00:00 AM	0.0	0.0	21.0	<1.0	0.0	21.0
11/27/2013 05:00:00 AM	Data not p	properly transmitted	l - see note	Data not p	properly transmitted	- see note

#### Notes:

Data was not properly transmitted beginning at approximately 04:52 AM on 11/27/2013. Data stored on the internal data loggers is being retrieved, and a revised report will be submitted to include the missing data from today's report.

\*Time indicates start of time period (ex. 12:00:00 AM gives the time period 12:00:00 AM to 12:59:59 AM)

	Observa	tion Relief V	Well -5		Obse	rvation Relief Well - 9			Observ	ation Relief W	ell - 9		Observ	ation Relief	Well -11			South of OG3.	A-1			Onsi	ite Trailers			Ons	site Trailers	
		ORW-5				ORW-9				ORW-9a				ORW-11a				Pad #9					TR-1				TR-1a	
	Non-				Non-				Non-				Non-					Non-				Non-				Non-		
	Methane				Methane				Methane				Methane					lethane			N	lethane				Methane		
Date-Time *	CO (ppm) VOC (ppm) I	H2S (ppm)	LEL (%)	O2 (%)	CO (ppm) VOC (ppr	i) H2S (ppm) LEL	(%) O2 (%	) CO (ppn	) VOC (ppm)	H2S (ppm)	LEL (%) O2 (%)	CO (ppm)	VOC (ppm)	H2S (ppm)	LEL (%)	O2 (%)	SO2 (ppm) VO	C (ppm) H2S (ppm)	LEL (%)	O2 (%)	CO (ppm) VO	C (ppm) H2	2S (ppm) LEL (%)	O2 (%)	CO (ppm) V	OC (ppm) H.	2S (ppm) LF	EL (%) O2 (%)
11/26/2013 05:00:00 AM	4 <1.0 0.0	0.0	0.0	20.9	0.0	0.0	0.0 20	9				<1.0	0.0	<1.0	0.0	20.7	0.0	0.0	0.0	20.5	0.0	0.0	0.0	20.9				
11/26/2013 06:00:00 AM	4 <1.0 0.0	0.0	0.0	20.9	0.0 0.0		0.0 21	0				<1.0	0.0	<1.0	0.0	21.0	0.0	0.0	0.0	20.5	0.0	0.0	0.0 0.0					
11/26/2013 07:00:00 AM	4 <1.0 0.0	0.0	0.0	20.9	0.0 0.0	0.0	0.0 21	Doto coll	antion at ODW	Oo booon of 11	:43 AM on 11/26/201	<1.0	0.0	<1.0	0.0	21.0	0.0	0.0	0.0	20.5	0.0	0.0	0.0	20.9				
11/26/2013 08:00:00 AM	4 <1.0 0.0	0.0	0.0	20.9	0.0 0.0	0.0	0.0 21	0 Data con	ection at OKW-	9a began at 11	.43 AM OII 11/20/201	<1.0	0.0	<1.0	0.0	21.0	0.0	0.0	0.0	20.5	0.0	0.0	0.0 0.0	20.9	Data collect	ion at TR-1a b	egan at 12:11	PM on 11/26/2013.
11/26/2013 09:00:00 AM	4 <1.0 0.0	0.0	0.0	21.0	0.0 0.0	0.0	0.0 21	0				<1.0	<1.0	<1.0	0.0	21.1	<1.0	0.0 <1.0	0.0	20.8	<1.0	0.0	0.0 0.0	20.9				
11/26/2013 10:00:00 AM	4 <1.0 0.0	0.0	0.0	21.0	0.0 0.0	0.0	0.0 20	9				0.0	<1.0	0.0	0.0	21.0	<1.0	0.0 <1.0	0.0	20.9	<1.0	0.0	0.0	20.7				
11/26/2013 11:00:00 AM	4 <1.0 <1.0	0.0	0.0	20.9	0.0 0.0	0.0	0.0 20	9 0.0	0.0	0.0	0.0 20.9	0.0	<1.0	0.0	0.0	20.9	<1.0	0.0 <1.0	0.0	20.9	<1.0	0.0	0.0 0.0	20.5				
11/26/2013 12:00:00 PM	1 0.0 0.0	0.0	0.0	20.9	,	•	•	0.0	0.0	0.0	0.0 20.9	0.0	0.0	0.0	0.0	20.9	<1.0	0.0 <1.0	0.0	20.9	<1.0	0.0	0.0 0.0	20.5	<1.0	0.0	0.0	0.0 20.4
11/26/2013 01:00:00 PM	1 0.0 0.0	0.0	0.0	20.9				0.0	0.0	0.0	0.0 20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0 0.0	0.0	20.9		•	•		<1.0	<1.0	0.0	0.0 20.9
11/26/2013 02:00:00 PM	1 0.0 0.0	0.0	0.0	20.9				0.0	0.0	0.0	0.0 20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0 0.0	0.0	20.9	1				<1.0	<1.0	0.0	0.0 20.9
11/26/2013 03:00:00 PM	1 0.0 0.0	0.0	0.0	20.9				0.0	0.0	0.0	0.0 20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0 0.0	0.0	20.9					0.0	0.0	0.0	0.0 20.9
11/26/2013 04:00:00 PM	1 0.0 0.0	0.0	0.0	20.9				0.0	0.0	0.0	0.0 20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0	0.0	20.9					0.0	0.0	0.0	0.0 20.9
11/26/2013 05:00:00 PM	1 0.0 0.0	0.0	0.0	20.9				0.0	0.0	0.0	0.0 20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0 0.0	0.0	20.9					0.0	0.0	0.0	0.0 20.9
11/26/2013 06:00:00 PM	1 0.0 0.0	0.0	0.0	20.9				<1.0	0.0	0.0	0.0 20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0 0.0	0.0	20.9					0.0	0.0	0.0	0.0 20.9
11/26/2013 07:00:00 PM	1 0.0 0.0	0.0	0.0	20.9				<1.0	0.0	0.0	0.0 20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0 0.0	0.0	20.9	1				<1.0	0.0	0.0	0.0 20.9
11/26/2013 08:00:00 PM	4 <1.0 0.0	0.0	0.0	20.9	ORW-9 relocated to	ORW-9a. Data collec	tion at ORW-	0.0	0.0	0.0	0.0 20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0 0.0	0.0	20.9	mp				<1.0	0.0	0.0	0.0 20.9
11/26/2013 09:00:00 PM	4 <1.0 0.0	0.0	0.0	20.9	stopped a	11:42 AM on 11/26/2	013.	0.0	0.0	0.0	0.0 20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0 0.0	0.0	20.9	TR-1 relocate		Data collection at TF	C-1 stopped at	0.0	0.0	0.0	0.0 20.9
11/26/2013 10:00:00 PM	4 <1.0 0.0	0.0	0.0	20.9	**			0.0	0.0	0.0	0.0 20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0 0.0	0.0	20.9	1	12:10 PM	on 11/26/2013.		0.0	0.0	0.0	0.0 20.9
11/26/2013 11:00:00 PM	1 0.0 0.0	0.0	0.0	20.9				<1.0	0.0	0.0	0.0 20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0 0.0	0.0	20.9					<1.0	0.0	0.0	0.0 20.9
11/27/2013 12:00:00 AN	4 <1.0 0.0	0.0	0.0	20.9				<1.0		0.0	0.0 20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0 0.0	0.0	20.9	1				0.0	0.0	0.0	0.0 20.9
11/27/2013 01:00:00 AM	4 00 00	0.0	0.0	20.9				0.0	0.0	0.0	0.0 20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0 0.0	0.0	20.9	1				0.0	0.0	0.0	0.0 20.9
11/27/2013 02:00:00 AM	4 0.0 <1.0	0.0	0.0	20.9	1			<1.0	0.0	0.0	0.0 20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0 0.0	0.0	20.9	1				<1.0	0.0	0.0	0.0 20.9
11/27/2013 03:00:00 AN	4 <1.0 0.0	0.0	0.0	20.9				0.0		0.0	0.0 20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0 0.0	0.0	20.9	1				<1.0	0.0	0.0	0.0 20.9
11/27/2013 04:00:00 AM	4 <1.0 <1.0	0.0	0.0	20.9	1			<1.0	0.0	0.0	0.0 20.9	0.0	0.0	0.0	0.0	20.9	0.0	0.0 0.0	0.0	20.9	1				<1.0	0.0	0.0	0.0 20.9
11/27/2013 05:00:00 AM	Data not prope	erly transmitt	ted - see not	2					Data not prop	erly transmitte	d - see note		Data not pro	perly transm	itted - see not	e	Data	a not properly transm	itted - see no	te	1				D	ata not properl	y transmitted	see note

Noise:
ORW-9 and TR-1 were relocated to ORW-9a and TR-1a respectively. The monitoring locations were relocated in support of new monitoring equipment installed on November 26, 2013.
Data was not properly transmitted beginning at approximately 04:52 AM on 11/27/2013. Data stored on the internal data loggers is being retrieved, and a revised report will be submitted to include the missing data from today's report.

### **RESPEC Consulting & Services**

Texas Brine, L.L.C.
Assumption Parish, Louisiana
Daily Field Report

Report By:	David Gnage				Date: 11/26/13
Company:	RESPEC				Job #: 02241
n.		Com		Tal	- T:41
Po	ersonnel	Con	pany	Joi	o Title
Time Onsite:	Start Time	: NA	End Time:	NA	
DAILY ACT	TIVITY:				
No Field Wor	k Conducted. RESP	EC was not on-site	e.		
Instrumenta No Work Cor	tion Program:				
Other Progra No Work Cor					
PROPOSED	SCHEDULE:				
	tion Program: rently Scheduled.				
Other Progra Installation of	ams: f a passive vent well a	at bubble site #56	is scheduled for the	ne week of Decem	iber 2 <sup>nd</sup> .
				Initial	s: <u>DJG</u>